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SOME ARACHNIDS FROM THE CARLSBAD CAVE OF NEW MEXICO.

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OPILIONES PALPATORES.

Family PHALANGIIDAE.

Types of the new species described in this paper are to be deposited in the United States National Museum.

Leiobunum townsendii Weed.

Two specimens were received, one (Bishopp No. 11519) from the surface near the entrance to the cavern, April 13, 1924, and the other (11258) presumably from the cave itself. Both are not fully mature. This species was described from Las Cruces, N. M. I have specimens from Anhalt and Braunsfels, Texas, and from Manitou, Colorado. It is a common open-air form in this region and its presence in the cavern is probably accidental.

ARANEIDA.

Family PHOLCIDAE.

Physocyclus enaulus, new species.

Female.—Length, 4 mm. Cephalothorax nearly circular, depressed at the median groove, pale yellowish, marked in the middle with a brownish Y-shaped mark, the anterior arms extending a short distance along the cervical grooves, the surface sparsely clothed with stiff pale brownish hairs. The eyes situated on a brownish area, but the pale color of the back extends forward between the posterior median eyes.

Posterior eyes nearly equal in size, in a recurved line, the median separated by considerably more than the diameter and subcontiguous to the lateral. Anterior eyes in a straight line, nearly equal in size, subcontiguus. Clypeus five times as wide as diameter of anterior median eye, marked with a broad light brownish band extending from the eyes to the margin, widened at base and at tip, narrower in middle part. Sternum, labium and endites pale yellowish. Sternum broader than long, rounded on the sides and behind. Labium much broader than long, sparsely clothed with short stiff dark hairs. Endites long, narrow, convergent, clothed with stronger hairs than labium. Chelicerae light yellowish-brown, white at base, slightly angulate externally, abundantly clothed

with long brown hairs; the inner tooth black, rather long, slender, curved. Legs pale with a dark ring near tip of femora, at base and near tip of tibia; femora gradually enlarged toward base. Palpi pale, last segment reddish brown.

Abdomen higher than long, compressed, rounded above, nearly straight below, dull grayish white, marked above and to a less extent on the sides with small grayish spots forming an indefinite herring-bone pattern on the back and leaving a lanceolate light area above the spinnerets.

The anterior process of the epigynum is rather short and projects straight downward (Fig. 1); when viewed from below and in front it is seen to be deeply and roundly notched with the opposing points slightly converging (Fig. 2). The posterior part of the epigynum is a strongly convex, transverse, plate, dark reddish-brown in color with a pale area at the middle behind; the posterior margin straight except at the ends where it appears to curve forward due to the overlapping of the posterior margin of the genital furrow. The latter is thickened, rounded, strongly protruding and light brown in color.

Type (female).—Carlsbad Cave, N. M. (Bishopp No. 11517). One specimen.

Family AGELENIDAE

Tegenaria antrias, new species.

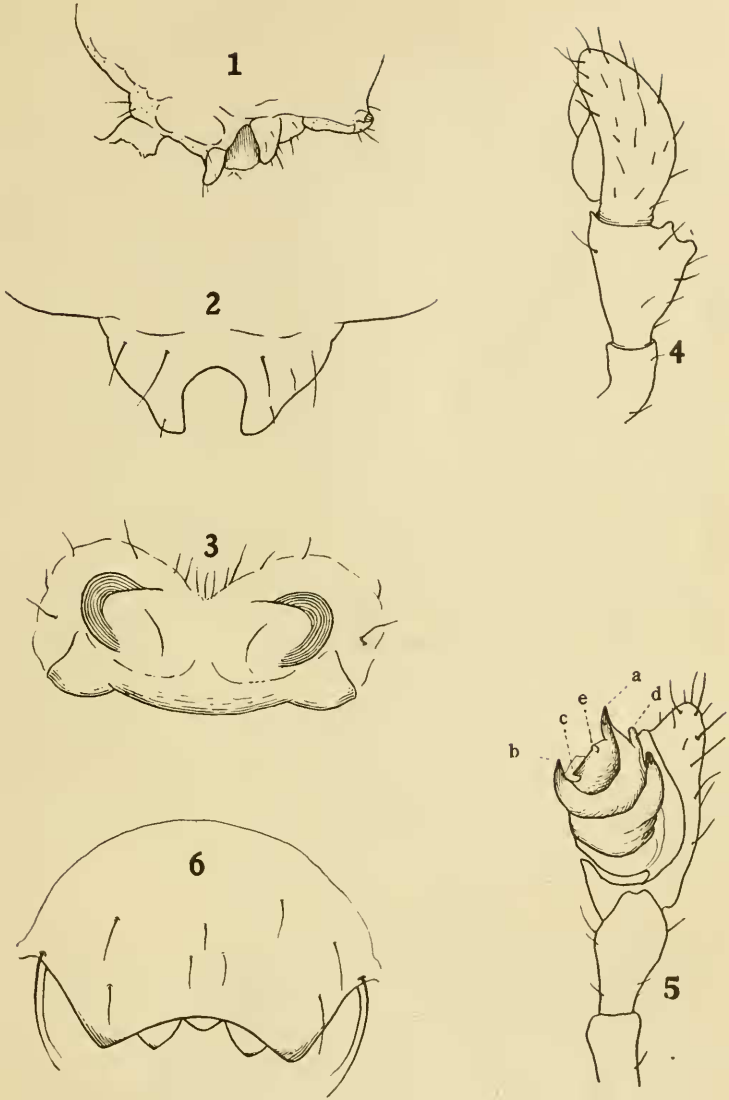
Female.—Length, 7 mm. Cephalothorax pale orange yellow suffused with gray; on the thorax the gray is darkest along the three radiating furrows and on the margin leaving an oval light space surrounding the median groove connected in front with the light area on the top of the head. Sides of the head marked with irregular dark lines coalescent behind and with a fine line running to each posterior eye in front.

Posterior eyes in a slightly procurved line, the median a little smaller than the lateral, separated by a little more than the diameter and slightly farther from the lateral. Anterior eyes subcontiguous, in a slightly procurved line, the median slightly smaller than the lateral. Clypeus twice as wide as diameter of an anterior median eye.

Sternum black on the sides with a yellowish median stripe which is broad in front with a scalloped edge and narrow behind; in the black areas are three yellowish spots on each side, the posterior pair being confluent with the median stripe. Labium, endites and chelicerae light brown. Lower margin of the furrow of the chelicerae armed with 4 small nearly equal teeth evenly spaced. Upper margin of the furrow armed near the tip of the claw with three small teeth, the middle one the largest.

Legs pale orange yellow with grayish annulations, distinct only on the posterior femora. Abdomen above dull gray with a pattern of darker gray chevrons and irregular lines. Ventral side of abdomen same as above marked with dark gray spots and lines. Epigynum (Fig. 3) a transversely quadrangular plate with the posterior margin convex in the middle and gently emarginate each side. The openings are far apart near the anterior angles and in ventral view look like semicircular black grooves.

Type (female).—Carlsbad Caves, N. M. One specimen (Bishopp No. 11518).



CROSBY—ARACHNIDS FROM CARLSBAD CAVE.

Family ARGIOPIDAE.

Subfamily LINYPHINAE.

Group ERIGONEAE.

Dr. S. C. Bishop and I have been studying the group of spiders which have been for the most part placed in the genus *Tmeticus* by Emerton and Banks, and which I (1905) transferred to the genus *Oedothorax*. This is a composite group and will have to be broken up and the species redistributed. One of the species from the Carlsbad Cave falls in one of these new groups. In order that it may be properly placed the following from our forthcoming paper is here published.

"In America there are a number of species which, in the structure of the genital bulb, are closely related to *Erigone*, but which lack the great development of teeth characteristic of that genus. For this group the following new genus is proposed:

PARERIGONE Crosby and Bishop, new genus.

Genotype.—*Erigone probatus* Cambridge.

Abdomen without chitinized sclerites; chelicerae without lateral teeth; no true postocular impressions in the male. The embolic division of the genital bulb consists of an irregular plate without a true tail-piece and which bears the embolus in the form of a minute tubercle. The ventral corner of the plate bears a short simple erect process, not greatly prolonged and denticulate as in *Montilaira* Chamberlin or extremely elongate as in *Catathorax* Chamberlin.

Parerigone also includes the following: *Tmeticus contortus* Emerton, *Tmeticus entomologicus* Emerton, *Tmeticus tmeticus index* Emerton, *Tmeticus rectangularis* Emerton, *Tmeticus trilobatus* Emerton, *Tmeticus simplex* Emerton."

Parerigone antraea, new species.

Male.—Length, 2 mm. Cephalothorax orange yellow, viewed from above rather broad, rounded on the sides, the sides convergent towards the front with a slight constriction at the cervical groove, broadly rounded across the front. Viewed from the side evenly ascending along the back to the posterior eyes with only a very slight depression at the cervical groove and gently arched just back of the eyes. Clypeus straight, somewhat projecting.

Posterior eyes in a straight line, nearly equal in size and equidistant, separated by a little less than the diameter. Anterior eyes in a straight line, the median much smaller than the lateral, close together but well separated from the lateral. Just below the anterior median eyes are two long stiff hairs directed forward and curving upward.

Sternum smooth, sparsely clothed with short stiff hairs. Chelicerae with a prominent tooth on face at the inner angle and with a row of small setiferous

tubercles on the outer margin. Legs and palpi light orange yellow. Abdomen probably gray (not in good condition).

Femur of palpus rather stout, armed below on the lateral side with a row of 5 or 6 spiniferous tubercles. Patella rather thick, curved downward. Ratio of length of femur to that of patella as 20 to 7. Tibia longer than patella, greatly widened distally, the dorso-lateral angle produced into a broad concave process which ends in two rounded teeth separated by a rounded emargination (Fig. 4). Paracymbium rather stout, strongly curved basally with the distal part more nearly straight with a small sharp hook at tip. The embolic division (Fig. 5) is boat-shaped, strongly curved upward in front and behind; the anterior tooth (*a*) recurved, sharp-pointed, the posterior tooth (*b*) stouter and more blunt. Between the two there is a thin longitudinal tooth (*c*) directed backward at the base of which lies a minute tubercle, the embolus. On the mesal side the edge of the embolic sclerite is extended upward as a broad plate which terminates distally in a rounded process (*d*). The median apophysis appears as a broad flattened curved process, the distal edge is turned up into a sharp tooth-like ridge, not shown in figure.

Female.—A little larger than the male. Epigynum (Fig. 6) a broad plate, transversely depressed, the sides convergent posteriorly and with the hind margin broadly and evenly concave with two rounded teeth projecting backward. Between these teeth at a lower level there appears a blunt tooth.

Holotype (male); *allotype* (female).—Carlsbad Cave, N. M.
1 ♂, 2 ♀.

EXPLANATION OF PLATE 1.

Fig. 1. *Physocyclus enaulus*. Lateral view of abdomen to show epigynum. Fig. 2. *Physocyclus enaulus*. Anterior process of epigynum viewed from in front and below. Fig. 3. *Tegenaria antrias*. Epigynum. Fig. 4. *Parerigone antraea*. Right palpus of male, dorsal view. Fig. 5. *Parerigone antraea*. Right palpus of male, ventral view. *a*, anterior tooth of embolic division; *b*, posterior tooth; *c*, median tooth; *d*, anterior process of lateral projection of embolic division; *e*, opening of ejaculatory duct. Fig. 6. *Parerigone antraea*. Epigynum.

LOCATION OF INDIVIDUAL HOSTS VERSUS SYSTEMATIC RELATION OF HOST SPECIES AS A DETERMINING FACTOR IN PARASITIC ATTACK.

BY R. A. CUSHMAN, U. S. Bureau of Entomology.

In going through some old literature recently I happened on the following paragraph:

“Within the last few weeks specimens of a Chalcid were received from a most careful observer and excellent collector, with the statement that they were reared from the eggs of a sawfly deposited in a willow leaf. While I am not in the habit of discrediting any statement which this gentleman makes, the